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REMARKS

Applicants appreciate Examiner Johnson's examination of the present application.

Applicants also appreciate the courtesy of Supervisory Patent Examiner Lillis. During a brief telephone conversation on May 12, 2005, Supervisory Patent Examiner Lillis explained that Examiner Johnson has retired from the Patent Office and that the examination of this application will be reassigned to a succeeding examiner.

As Examiner Johnson's retirement requires the examination be resumed by a succeeding examiner, Applicants request that Supervisory Patent Examiner Lillis kindly ensure that any rejection in the next Office Action not be made final. In responding to this Office Action, Applicants have strived to facilitate the succeeding examiner's resumption of the examination and would welcome the opportunity to interview the succeeding examiner in an effort to advance the prosecution of this application. In this regard, the undersigned patent attorney may be reached directly at (704) 945-6702.

Applicants respond herein to the issues presented in the Office Action dated January 18, 2005.

amendments to the specification

Applicants have amended Paragraph 63 to include a reference to brace 32, which is shown in Figure 7 as filed, as well as to add a period to the last sentence.

restriction and election

In their response to the restriction requirement dated January 14, 2004, Applicants elected without traverse to prosecute apparatus claims 1-41 and 47-60, but traversed Examiner Johnson's requirement for an election of species. Nonetheless, Applicants opted to elect species C, which Applicants understood to embrace the chip diffuser embodiments depicted in Figures 7-8. Applicants further explained that elected Claims 1-41 and 47-60 seemed pertinent to this purported species.

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In the Office Action dated January 18, 2005, however, Examiner Johnson set forth his withdrawal of Claims 3–7, 9–12, 18–22, 29, 30, 33–35, 41–75, thereby leaving only Claims 1, 2, 8, 13–17, 23–28, 31, 32, and 36–40 to be examined initially.

Although Examiner Johnson made this final, Applicants continue to disagree with Examiner Johnson's justification for the sub-restriction requirement among purported species. Applicants set forth their reasons for traversal in their January 14, 2004, response to the restriction requirement. That said, Applicants reiterate that they based their species election (and identification of Claims 1–41 and 47–60 as pertinent to species C) on an assumption that Examiner Johnson had recognized mutually exclusive toe bar designs (*i.e.*, non-curved and curved) in species A and species C, respectively. Applicants respectfully contend that it is inapt for Examiner Johnson to imply that their species election was anything more than an identification of mutually exclusive toe bar designs.

To be sure, Applicants were uncertain of Examiner Johnson's intention in identifying species A, species B, and species C. Applicants are now uncertain as to Examiner Johnson's rationale for withdrawing some of the elected claims (*e.g.*, Claim 41) but not others (*e.g.*, Claims 39–40). Applicants respectfully assert that Examiner Johnson's apparent standard for Applicants to challenge the withdrawal of the elected claims (*i.e.*, Claims 3–7, 9–12, 18–22, 29, 30, 33–35, 41, and 47–60) is unfounded. Consequently, Applicants respectfully decline to challenge the withdrawal of these elected claims on these terms.

Instead and in view of Examiner Johnson's retirement, Applicants respectfully request that the succeeding examiner kindly reconsider Applicants' prior remarks with respect to the sub-restriction requirement and election of species. After the succeeding examiner has had an opportunity to assess how to resume the examination of this application, Applicants will cancel the non-elected method Claims 42–46 and 61–75 if the succeeding examiner determines that rejoinder of these claims as set forth in MPEP § 821.04 is inapt.

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That said and as set forth herein, Applicants contend that Claim 1 defines patentable subject matter over the cited references. Paired with Examiner Johnson's prior acknowledgement that Claim 1 is generic, a finding that Claim 1 is allowable means that the succeeding examiner may rejoin the withdrawn apparatus claims, thereby dispensing with any disagreement over the aforementioned sub-restriction requirement. Moreover, Applicants respectfully request that, in that instance, the succeeding examiner kindly consider rejoining the non-elected method claims as set forth in MPEP § 821.04.

drawing amendments

Applicants have revised sheet 3 in order to bracket the exploded views of Figure 5 and Figure 6 in accordance with 37 CFR § 1.83. Applicants request that the succeeding examiner kindly replace sheet 3 as filed with this replacement sheet.

"spider helix rotor assembly"

The specification as filed describes a rotor assembly 11 that is rotatably connected to a central shaft stem 12. See Paragraph 33–34. The specification as filed further explains that (i) the central shaft stem 12 may include axle means 12a, which rotatably connects to the rotor assembly 11 or (ii) the rotor assembly 11 may include axle means 12a, which rotatably connects to the central shaft stem 12.

The elected claims recite a "spider helix rotor assembly," a kind of rotor assembly 11. The specification as filed describes the term "spider helix" as an arrangement wherein at least two vane mounting rods 13 are non-radially connected to a spider hub 14 in a modified hub-and-spoke arrangement. See Paragraph 35. This non-radial offset distinguishes the spider helix arrangement of the present chip diffuser as claimed from a radial-spoke arrangement. See Paragraphs 37–39. Indeed, the specification as filed explains that the spider helix rotor assembly 11 of the present invention has its vane mounting rods 13 aligned away from the chip diffuser's axis at the center of the spider hub 14. See Paragraph 41.

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There is no implicit contradiction in describing such a spider helix rotor assembly as "substantially planar." See Claim 5. For example, the drawings—particularly Figures 2, 4, 5, and 6—depict a planar spider helix rotor assembly 11 that includes a spider hub 14 and attached vane mounting rods 13. Applicants respectfully maintain that the specification as filcd describes with substantial detail the structure of the spider helix rotor assembly.

In view of the foregoing, Applicants respectfully request that the succeeding examiner withdraw those objections to the specification and drawings that relate to the spider helix rotor assembly.

"between about"

Applicants respectfully contend that the phrase "between about" is definite.

Numerical ranges are permissible—a phrase of the form "between about X and Y" simply defines a numerical range between X and Y. See MPEP § 2073.05(c).

Similarly, the relative term "about" is permissible to provide flexibility to a numerical limitation (e.g., "about X"). See MPEP § 2073.05(b).

Therefore, a phrase of the form "between about X and Y" may be understood to define a numerical range from "about X" to "about Y."

In view of the foregoing, Applicants respectfully request that the succeeding examiner reconsider the objection to the recitation "between about" and thereupon withdraw the indefiniteness rejections of Claims 7, 10, and 15–17.

* * *

As noted, Applicants elected to prosecute Claims 1–41 and 47–60. Of these apparatus claims, only Claim 1 and Claim 47 are independent. As Examiner Johnson has temporarily withdrawn independent Claim 47 from consideration, Claim 1 is the sole independent claim that is rejected.

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U.S. Patent No. 750,241 (Buck)

Examiner Johnson rejected independent Claim 1 as well as dependent Claims 2, 13, and 31–32 as being anticipated by U.S. Patent No. 750,241 (Buck).

The Buck '241 patent, however, fails to teach or suggest the invention recited in independent Claim 1. The '241 patent does not disclose vanes that are attached to mounting rods at an angled pitch (e.g., relative to a vertical axis such as that defined by Buck's axle D). See Paragraph 52 (discussing the orientation of the vanes 21); see also Figures 7–8 (depicting pitch *c* of the vanes 21). Indeed, the '241 patent fails to disclose the use of vanes whatsoever.

Instead, the '241 patent discloses a chain-driven spreading machine that levels piled materials (e.g., coal, wheat, or corn) within a bin. Buck's spreading machine employs hub E, carrying radial arms F, to rotate on axle D. In particular, wooden extensions f, which are attached to the underside of radial arms F, are rotated by sprocket-wheel m that is itself driven by a continuous chain O.

Applicants respectfully assert that the Buck '241 patent fails to teach or suggest either vane mounting rods or vanes that are attached at an angled pitch to such mounting rods as recited in Claim 1 (and its dependent claims). Therefore, Applicants respectfully request that the succeeding examiner withdraw the anticipation rejections that rely on the Buck '241 patent.

U.S. Patent No. 4,555,210 (Wigram) & U.S. Patent No. 3,315,823 (Rickoff)

Examiner Johnson also rejected dependent Claims 8, 14–17, 23–24, 26–28, and 38 as being anticipated by U.S. Patent No. 4,555,210 (Wigram), which discloses a spreader device having a generally conical body that is suspended for rotation about its longitudinal axis.

Likewise, Examiner Johnson rejected dependent Claim 36 as being anticipated by U.S. Patent No. 3,315,823 (Rickoff), which discloses a rotary grain distributor that includes a cone-shaped rotor to which are attached outwardly projecting vanes or fins.

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Neither the Wigram '210 patent nor the Rickoff '823 patent, however, includes each limitation of independent Claim 1, much less the cited dependent claims. In particular, neither reference teaches or suggests a spider helix rotor assembly that includes a spider hub that is rotatably mounted onto a central shaft stem and at least two vane mounting rods that are non-radially attached to the spider hub. Moreover, neither reference teaches or suggests vanes that are attached at an angled pitch to these mounting rods.

Rather, both of these references disclose spreader devices that are characterized by conical surfaces. See U.S. Patent No. 4,555,210 at column 1, lines 32-46 and U.S. Patent No. 3,315,823 at column 1, lines 30-41. These patents disclose very different designs from the claimed chip diffuser. Applicants, in fact, discuss in the background section of the specification similar kinds of rotatably-mounted devices. See Paragraphs 5-8 (discussing both pyramidal and conical distributors).

As neither the Wigram '210 patent nor the Rickoff '823 patent is an apt reference for independent Claim 1, it follows that these references are inapt, too, for those claims that depend upon independent Claim 1. Therefore, Applicants respectfully request that the succeeding examiner withdraw the anticipation rejections of Claims 8, 14-17, 23-24, 26-28, and 38 as being anticipated by U.S. Patent No. 4,555,210 (Wigram) and withdraw the anticipation rejection of Claim 36 as being anticipated by U.S. Patent No. 3,315,823 (Rickoff).

Finally, Examiner Johnson rejected Claim 37 as being rendered obvious by the Rickoff '823 patent in combination with U.S. Patent No. 3,490,619 (DeWittie) or Swedish Patent No. 43,587 (Morck).

Examiner Johnson admitted that the DeWittie '619 patent and the Morck '587 patent fail to show vanes that are attached to mounting rods, but contended that the Rickoff '823 patent does. For reasons explained (above), Applicants respectfully disagree with Examiner Johnson's assessment of the Rickoff '823 patent. The '823 patent simply fails to teach or suggest a spider helix rotor assembly that includes a

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spider hub that is rotatably mounted onto a central shaft stem and at least two vane mounting rods that are non-radially attached to the spider hub. Hence, the Rickoff '823 patent in combination with either the DeWittie '619 patent or the Morck '587 fails to teach or suggest the present invention as recited in Claim 37. Applicants respectfully request that the succeeding examiner withdraw this obviousness rejection of Claim 37.

Finally, the Office Action seems to be silent with respect to reasons for the apparent rejections of dependent Claims 25 and 39-40.

CONCLUSION

In view of the foregoing, Applicants respectfully assert that independent Claim 1 is in condition for immediate allowance. Accordingly, Applicants respectfully request that the succeeding examiner rejoin the withdrawn apparatus claims and pass elected Claims 1-41 and 47-60 to issuance.

Respectfully submitted,



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